

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 18-28 are currently pending in this application. No claim amendments are presented, thus, no new matter is added.

In the outstanding Office Action, Claims 18-28 were rejected under 35 U.S.C. §103(a) as unpatentable over Keller et al. (Vehicular Technology, IEEE Transactions on, Vol. 49, Issue 5, September 2000, pages 1893-1906, hereafter “Keller”) in view of Hashem et al. (U.S. Patent No. 6, 701,129, hereafter “Hashem”).

Applicants thank the Examiner for the courtesy of an interview extended to Applicants’ representatives on March 11, 2008. During the interview, the differences between the claims and the applied art were discussed. In addition, the Examiner indicated that the claims appear to distinguish over the applied art. The arguments presented during the interview are presented for formal consideration.

With respect to the rejection of Claim 18 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. Claim 18 recites, *inter alia*,

precalculating a plurality of adaptive loading tables, each loading table containing x subcarriers for modulation with a lower modulation scheme, y subcarriers for modulation with a standard modulation scheme, and z subcarriers for modulation with a higher modulation scheme (x, y, and z are integer numbers); wherein the sum of x, y, and z is n and a resulting number of coded bits of a multicarrier symbol is constant.

Applicants respectfully submit that the combination of Keller and Hashem fails to disclose or suggest at least these features of Claim 18.

Keller is directed towards an adaptive modulation method for duplex OFDM transmission. As admitted in the outstanding Office Action, Keller fails to disclose or

suggest “precalculating a plurality of adaptive loading tables, each loading table containing x subcarriers for modulation with a lower modulation scheme, y subcarriers for modulation with a standard modulation scheme, and z subcarriers for modulation with a higher modulation scheme,” as defined by Claim 18. The outstanding Office Action relies on Hashem to remedy the deficiencies of Keller.

Hashem relates to a digital radio communication system that is trying to reduce the overhead transmitted between two radio communication units, where the overhead describes the channel quality and the optimum transmission parameters for each subcarrier of a system such as an orthogonal frequency division multiplexing (OFDM) system (see Abstract of Hashem).

Within the system of Hashem, a base station transmits a frame of data to a remote unit by using a current base station link mode (LM). A link mode is thereby a set of at least one mission parameter, such as a modulation level or a coding rate. Figure 2 of Hashem shows a table of link modes stored in the memory of the base station which are either predetermined or negotiated with the remote unit when a transmission is initiated (see col. 3, lines 41-56).

The Office Action takes the position that the tables containing a plurality of link modes described in Hashem correspond to the plurality of adaptive loading tables defined by Claim 18 (see Office Action, at page 2 and pages 5-6, citing col. 3, lines 45-52 and col. 7, lines 1-11 of Hashem). The table described in Fig. 2 of Hashem shows different link modes (such as QPSK, 16-QAM, and 64-QAM) that are allowed to be used between a base station and a remote unit. However, the link mode table described in Hashem does not describe the number of sub-carriers to be used at different modulation schemes among the total number of sub-carriers.

Additionally, where Hashem does describe applying a link mode for a group of sub-carriers, Hashem only describes grouping adjacent sub-carriers into a sub-band and then

applying the same link mode to that group (see col. 6, line 49 to col. 7, line 11). However, in that case, Hashem is not referring to a table that includes the number of sub-carriers to be modulated under a specific link mode.

Therefore, Hashem fails to disclose or suggest “precalculating a plurality of adaptive loading tables, each loading table containing x subcarriers for modulation with a lower modulation scheme, y subcarriers for modulation with a standard modulation scheme, and z subcarriers for modulation with a higher modulation scheme,” as defined by Claim 18.

Therefore, Hashem fails to remedy the deficiencies of Keller with regards to Claim 18.

Therefore, Applicants respectfully submit that Claim 18 (and all associated dependent claims) patentably distinguishes over Keller and Hashem, either alone or in proper combination.

Independent Claims 25 and 26 recite features similar to those of Claim 18. Therefore, Applicants respectfully submit that Claims 25 and 26 (and all associated dependent claims) patentably distinguish over Keller and Hashem, either alone or in proper combination.

Consequently, in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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